

CLAIMS:

1. An aggregated composition comprising (a) a polypeptide having the transport function of VP22, and (b) an oligonucleotide or polynucleotide.
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2. An aggregated composition according to claim 1, which further comprises a pharmaceutically acceptable excipient.
3. An aggregated composition according to claim 1, wherein the
10 polypeptide is a VP22 fragment comprising amino acid residues 159-301 of VP22.
4. An aggregated composition according to claim 1, wherein the oligonucleotide or polynucleotide comprises a circular plasmid.
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5. An aggregated composition according to claim 1, wherein the oligonucleotide or polynucleotide comprises modified phosphodiester linkages.
6. An aggregated composition according to claim 5, wherein the
20 modified phosphodiester linkages comprise phosphorothioate linkages.
7. An aggregated composition according to claim 1, wherein the oligonucleotide or polynucleotide is labeled with a detectable label.
8. An aggregated composition according to claim 1, wherein the
25 oligonucleotide or polynucleotide is selected from the group consisting of: an antisense molecule, a ribozyme molecule, a chimero-plast, and a polynucleotide capable of binding a transcription factor.
9. An aggregated composition according to claim 1, wherein the
30 oligonucleotide or polynucleotide encodes a protein or peptide.

10. An aggregated composition according to claim 1, wherein the polypeptide is a fusion protein comprising a non-VP22 peptide or protein.

5 11. An aggregated composition according to claim 10, wherein the non-VP22 polypeptide sequence is linked to the polypeptide having the transport function of VP22 by a cleavage-susceptible amino acid sequence.

12. An aggregated composition according to claim 1, wherein the polypeptide is conjugated to a glycoside.

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13. An aggregated composition according to claim 1, wherein the oligonucleotide or polynucleotide is coupled to a non-nucleotide molecule.

14. An aggregated composition according to claim 1, wherein the
15 aggregate comprises polypeptide and nucleotide in a ratio of at least 1 to 1.

15. An aggregated composition according to claim 1, wherein the oligonucleotide or polynucleotide comprises at least about 10 bases.

20 16. An aggregated composition according to claim 1, which comprises particles of said aggregated composition having a particle size in the range of about 0.1 to about 5 microns.

25 17. An aggregated composition according to claim 1, wherein said polypeptide and said nucleotide are encapsulated in a liposome.

18. A method of making an aggregated composition according to claim
1 comprising, (a) mixing a polypeptide with the transport function of VP22,
with the oligonucleotide or polynucleotide, and, (b) allowing the mixture
30 obtained in step (a) to form aggregates.

19. A method according to claim 18, wherein the polypeptide is mixed with nucleotide in a ratio of at least 1 to 1 of polypeptide to nucleotide.

20. A method of delivering molecules to a cell in vitro comprising (a)
5 contacting said cell with an aggregated composition according to claim 1.

21. A cell preparation which as been treated with an aggregated composition according to claim 1.

10 22. The method of claim 18, wherein the aggregates have a particle size of about 0.1 to about 5 microns.

23. The method of claim 20, further comprising (b) exposing the cell to light to promote disaggregation of the aggregated composition.